# TED03 – (Part E5) Dissolved Oxygen in Water

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. E.5.1 **Outline** biochemical oxygen demand (BOD) as a measure of oxygen demanding wastes in water. (2)
   1. Provide the definition for Biological Oxygen Demand (BOD)
   2. Discuss solubility of oxygen in water and its importance on fish life: (use values for Temp and ppm)
   3. Organic materials will natural decay by action of microorganisms and in the process use up the dissolved oxygen, hence **BOD**. Provide the equation for **aerobic decomposition**:
   4. What are the conditions for water with small and large BOD?
2. E.5.2 **Distinguish** between aerobic and anaerobic decomposition of organic material in water. (2) Use redox equations as appropriate.
3. E.5.3 **Describe** the process of eutrophication and its effects. (2)
   1. What is Eutrophication?
   2. Why do lake environments favor fish over plant life?
   3. Explain the production of **algal bloom** and its impact:
   4. Explain the impacts after death of the algae:
4. E.5.4 **Describe** the source and effects of thermal pollution in water. (2)
   1. How does the temperature of water affect the solubility of oxygen gas? How is this different than the effect of temperature on the solubility of solid compounds?
   2. Why is oxygen concentration decreased when temperature rises in water?
   3. What is thermal pollution, where does it come from?
   4. How do changes in temperature affect the fish cycle?
   5. How can thermal pollution cool the body of water?